REMARKS

Reconsideration and continuing examination of the above-identified application is respectfully requested in view of the amendments above and the discussion that follows.

Claims 1, 18, 47, 51, 56, 63 and 75 have been amended. Claims 10, 11, 34, 39-41 have been cancelled and claims 79-115 have been cancelled pursuant to the restriction requirement and without prejudice. Claims 2-9, 12-17, 19-33, 35-38, and 42-48 were said to be free of the art. Claims 1-9, 12-17, 19-33, 35-38 and 42-78 are in the case and are before the Examiner.

A. The Amendments

Claims 1 and 18 have been amended to cancel recitation of the HBc immunodominant loop that contains the complete HBc sequence and is free of any substitution or deletion. Claims 51 and 63 were amended pursuant to the Examiner's helpful suggestion to clarify that the meaning of "comprised of" is "comprising", as that word is usually used in patent law to indicate an open claim. Claim 56 was amended to correct the error noted by the Examiner in which the wrong claim was cited for dependency. Claims 10, 11, 34 and 39-41 have been cancelled in view of the amendments to claims 1 and 18. Sub-paragraph (d) of claim 75 contains an amendment that deleted a mis-spelled word and replaced it with a properly spelled word, "cysteine". Claim 47 has been amended to delete "bovine inhibin" from the list of pathogen sequences, as it is not from a pathogen. Claims 79-115 were cancelled pursuant to the restriction requirement.

It is thus submitted that no new matter has been added by these amendments.

B. The Action

Rejection Under 35 USC §112,

Second Paragraph

(a). Comprised of

Claims 51-78 were rejected as allegedly being indefinite because of the use of the phrase "comprised of" in independent claims 51 and 63. The Action noted that it was not clear whether "comprised of" was intended to be open language equivalent to "comprising" or closed and equivalent to "consisting of".

Attached Exhibit I is a copy of a printout obtained by searching the US Patent Office data base for all of the patents issued from 1975 through the present whose claims include the phrase "comprised of". The printout notes that more than 113,000 presumptively valid US patents issued with claims having the phrase "comprised of". In view of the presumptive validity of those more than 113,000 US patents, it cannot be agreed that the present use of "comprised of" is indefinite under the second paragraph of Section 112. On the other hand, although it cannot be agreed that "comprised of" could mean consisting of, the two claims have been amended to recite "comprising" to speed prosecution. This rejection is thus additionally believed moot.

(b). Claim 56

Claim 56 was said to be indefinite because it was dependent on claim 1. The Examiner helpfully pointed out that that dependence should have been on claim 51, and the claim has been so amended, thereby mooting this rejection.

2. Rejection Under 35 USC §102

Claims 1, 10, 11, 18, 34, 39, 40, and 41 were rejected as anticipated by the disclosures of Zlotnick et al. that was cited on Form PTO 1449 as A29. That paper is said to teach a truncated HBc construct having that anticipates a construct of the claims that contains no heterologous amino acid residues. It is believed that the present amendments that recite an HBc construct that includes a peptide-bonded heterologous epitope or a heterologous linker residue for a conjugated epitope overcomes this rejection and makes it moot.

3. Provisional Double-Patenting Rejection

Claims 1-78 were provisionally rejected under the judicially created doctrine of "obviousness-type" double patenting in view of specified claims of each of copending applications No. 10/082014, No. 10/080299, and No. 09/931325. It is noted that none of the enumerated applications has allowed claims at this time. However, to speed prosecution, Terminal Disclaimers and their appropriate fees are enclosed over each of the recited applications to speed prosecution.

C. Summary

Claims 1, 18, 47, 51, 56, 63 and 75 have been amended. Claims 10, 11, 34, 39-41 have been cancelled herein, and claims 79-115 have been cancelled pursuant to the restriction requirement and without prejudice. Each of the bases for rejection has been dealt with and overcome or otherwise made moot.

It is therefore believed that this application is in condition for allowance of all of the pending claims. An early notice to that effect is earnestly solicited.

No further fee or petition is believed to be necessary. However, should any further fee be needed, please charge our Deposit Account No. 23-0920, and deem this paper to be the required petition.

The Examiner is requested to phone the undersigned should any questions arise that can be dealt with over the phone to expedite this prosecution.

Respectfully submitted,

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Enclosures
Exhibit I
Terminal Disclaimers and fees
Copy of Assignment document and Recordation Cover Sheet

CERTIFICATE OF MAILING

I hereby certify that this Reply and Amendment and its stated enclosures, and Terminal Disclaimer and its fee are being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to:
Assistant Commissioner for Patents, Washington, D.C. 20231 on April 16, 2004.

Edward P. Gamson